

State Indicators

S-49 Academic Science and Engineering Article Output per \$1 Million of Academic S&E R&D

Description

This indicator represents the relationship between the number of academic S&E publications and the amount of money expended for academic S&E R&D. Academic institutions include 2-year colleges, 4-year colleges or universities, medical schools, and university-affiliated research centers. This indicator is not an efficiency measure; it is affected by the highly variable costs of R&D and by publishing conventions in different fields and institutions. It may also reflect variations in field emphasis among states and institutions. Decreases in this indicator may be an effect of general price inflation as well as rising academic research costs.

Publication counts are based on the number of articles that appear in a set of journals tracked by Elsevier's Scopus database as of December 2016. The journal set consists of S&E publications (including publications on the natural sciences, the applied sciences, the medical sciences, and the social sciences but excluding the arts and humanities). Only documents published in refereed scientific journals are counted (mostly articles, reviews, and conference proceedings), as these documents were reviewed by peers prior to being accepted for publication. The peer-review process is designed to ensure that the research is of good quality and constitutes an original contribution to scientific knowledge. Fractional counting at the level of researchers is used to ensure that a single paper is not counted several times. For example, if two of three authors are in state A and the third author is in state B, then two-thirds of the publication is attributed to state A, and one-third is attributed to state B.

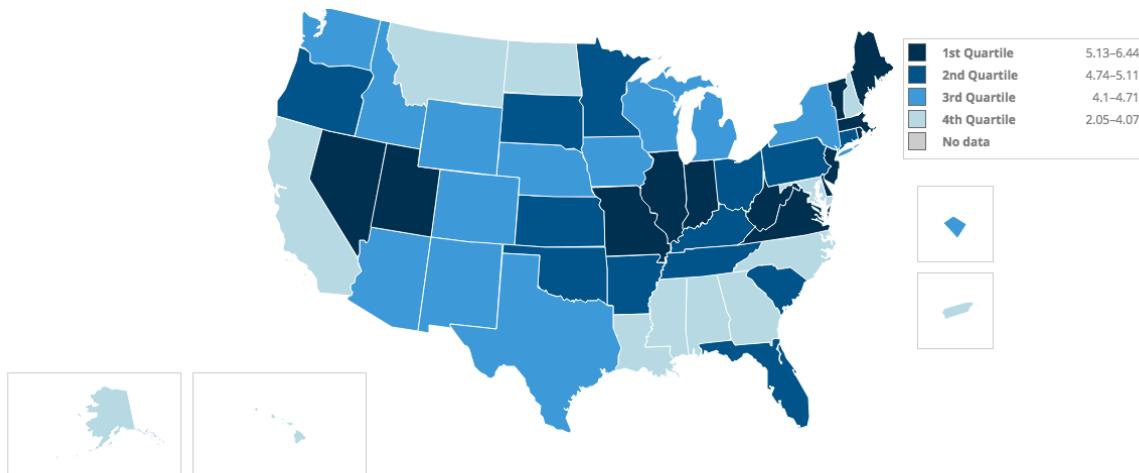
Data on academic R&D are provided by the National Center for Science and Engineering Statistics and represent R&D at U.S. colleges and universities with over \$150,000 in R&D expenditures.

Data source: Science-Metrix, special tabulations from Scopus; National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development.

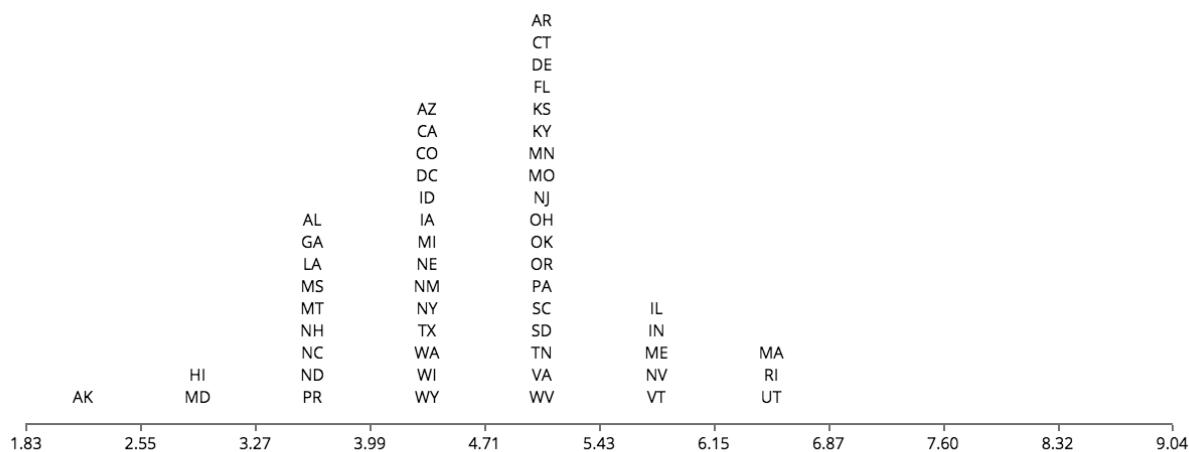
State Indicators

S-49 Academic Science and Engineering Article Output per \$1 Million of Academic S&E R&D

2016



Distribution of states across indicator values, 2016



Histograms do not display states with extreme values. Please consult the data tables for exact indicator values for each state. State positions on the histogram are based on unrounded values of the indicator and may not always match the rounded values displayed in the table.

State Indicators

Academic Science and Engineering Article Output per \$1 Million of Academic S&E R&D

(Articles)

State	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
United States	5.61	5.66	5.81	5.70	5.65	5.50	5.31	5.12	5.04	5.12
Alabama	4.96	5.33	5.49	5.51	5.23	4.96	4.54	4.13	4.13	4.66
Alaska	1.88	1.83	2.34	1.99	2.69	3.08	2.79	2.82	2.95	2.95
Arizona	5.71	5.71	5.75	5.44	5.61	5.34	5.16	5.24	5.12	4.92
Arkansas	5.19	5.90	5.83	4.97	5.37	5.08	5.22	4.98	4.95	5.00
California	5.16	4.88	5.07	5.03	4.98	4.85	4.73	4.70	4.64	4.63
Colorado	5.31	5.29	5.30	5.55	5.16	5.07	4.53	4.32	4.37	4.52
Connecticut	6.50	6.58	6.80	6.79	6.63	6.63	6.70	5.87	5.80	6.13
Delaware	8.22	8.35	9.04	8.33	8.42	8.29	8.07	6.40	6.24	6.49
District of Columbia	6.59	6.43	6.82	7.01	6.42	5.62	6.62	5.32	5.57	5.57
Florida	5.94	6.17	6.30	6.27	6.26	6.35	6.22	5.92	5.67	5.82
Georgia	4.82	5.19	5.40	5.27	5.38	4.88	4.89	4.97	4.95	4.89
Hawaii	4.47	3.72	3.85	3.91	4.00	4.14	3.67	3.56	3.49	3.35
Idaho	4.51	4.48	4.78	5.94	5.84	5.60	5.88	5.20	5.49	4.56
Illinois	6.34	6.50	6.74	6.74	6.75	6.47	6.17	6.27	6.02	6.08
Indiana	6.48	6.06	7.56	7.33	6.95	6.66	6.52	6.54	6.20	6.40
Iowa	5.80	5.77	6.06	5.82	5.61	6.49	6.00	4.95	4.86	5.00
Kansas	5.76	5.70	5.82	5.65	5.52	5.05	5.18	5.11	5.19	5.20
Kentucky	5.50	5.07	5.63	5.21	5.25	5.35	4.96	4.93	5.17	5.27
Louisiana	4.69	4.45	4.97	4.62	4.17	3.83	3.99	4.36	4.38	4.29
Maine	5.59	5.10	5.85	4.42	4.33	4.12	4.53	4.95	4.63	5.03
Maryland	3.52	3.36	3.59	3.35	3.49	3.20	2.92	2.92	2.85	2.98
Massachusetts	8.40	8.50	8.70	8.96	8.91	8.78	8.24	7.91	7.97	7.59

State Indicators

State	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Michigan	5.58	5.95	6.31	6.30	6.35	6.11	5.94	5.50	5.43	5.30
Minnesota	6.50	6.88	7.36	6.70	6.75	6.09	5.91	5.59	5.52	5.53
Mississippi	3.56	3.49	4.18	4.20	3.59	3.96	3.94	3.89	3.80	3.86
Missouri	5.38	5.51	5.66	5.72	5.69	5.79	5.54	5.86	5.77	5.56
Montana	3.43	3.16	3.13	3.75	3.51	3.39	3.46	3.20	3.61	3.63
Nebraska	4.63	5.26	4.96	4.85	4.92	4.71	4.52	4.74	5.16	4.68
Nevada	4.58	4.64	4.68	4.90	4.99	5.54	5.63	5.91	6.43	6.35
New Hampshire	3.73	3.61	3.83	3.63	3.74	3.65	3.81	3.97	3.57	3.53
New Jersey	6.40	6.23	6.35	6.51	6.54	6.40	6.28	5.60	5.44	5.68
New Mexico	3.91	4.55	4.08	3.56	3.62	3.62	3.63	3.76	3.94	4.06
New York	6.10	6.04	6.01	5.91	5.70	5.77	5.66	5.06	4.88	5.02
North Carolina	5.28	5.54	5.29	5.32	5.19	4.90	4.58	4.24	4.20	4.33
North Dakota	3.36	3.31	3.99	3.97	3.56	3.93	3.53	3.59	3.46	3.66
Ohio	6.23	6.52	6.14	5.82	5.55	5.42	5.21	5.07	5.02	5.35
Oklahoma	5.12	6.19	6.10	6.06	6.24	6.09	6.17	5.53	5.47	5.63
Oregon	5.47	5.24	5.24	5.20	5.25	5.12	4.74	4.50	4.68	4.92
Pennsylvania	6.64	6.44	6.72	6.51	6.64	6.43	6.16	5.82	5.74	5.87
Rhode Island	7.49	7.61	8.18	7.37	7.35	7.21	6.95	6.34	5.83	6.16
South Carolina	4.67	4.88	4.90	4.68	4.32	4.62	4.34	4.63	5.17	5.31
South Dakota	4.74	3.99	4.63	4.00	4.55	4.18	3.96	3.60	3.68	4.30
Tennessee	5.56	5.64	5.48	5.55	5.57	5.77	5.48	5.33	5.32	5.36
Texas	5.05	5.24	5.40	5.19	5.20	4.88	4.71	4.65	4.71	4.74
Utah	5.86	6.31	6.90	7.17	7.33	7.02	6.22	5.92	5.73	5.85
Vermont	4.90	5.14	5.26	5.45	5.88	5.72	5.34	5.21	5.12	6.13
Virginia	6.69	6.39	6.58	6.35	6.51	6.26	6.21	6.19	5.55	5.86
Washington	5.53	5.57	6.05	5.47	5.66	5.35	5.23	4.52	4.24	4.43

State Indicators

State	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
West Virginia	5.14	5.08	5.26	5.31	4.86	4.82	5.11	5.06	5.10	5.19
Wisconsin	4.85	4.83	4.89	4.83	4.94	4.66	4.45	4.35	4.17	4.34
Wyoming	4.81	5.40	4.18	4.13	5.26	5.46	5.17	7.93	8.62	7.48
Puerto Rico	4.74	3.86	4.10	4.85	4.59	4.80	5.06	5.08	3.23	3.48

Note(s):

Articles were fractionally allocated among regions/countries/economies based on the proportion of residences of all named authors. The publication total for the United States reported here includes Puerto Rico, as well as articles for which the location could not be determined; Academic R&D is reported for institutions with R&D over \$150,000. The national total for the United States includes U.S. territories.

Source(s):

Science-Metrix, special tabulations from Scopus, data as of July 2017; National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey (various years), data as of August 2017.

Recommended Citation: National Science Board. 2018. "Academic Science and Engineering Article Output per \$1 Million of Academic S&E R&D." Science and Engineering Indicators 2018, State Indicators. Alexandria, VA: National Science Foundation (NSB-2018-1). <https://www.nsf.gov/statistics/state-indicators/indicator/academic-se-articles-per-1-million-in-academic-rd>

Last updated: January 18, 2018

Science and Engineering Indicators 2018

State Indicators

Academic Science and Engineering Article Output per \$1 Million of Academic S&E R&D

(Articles)

State	2013	2014	2015	2016
United States	5.11	5.16	4.97	4.55
Alabama	4.81	4.86	4.29	3.90
Alaska	3.37	2.51	2.60	2.05
Arizona	4.76	5.17	4.85	4.51
Arkansas	5.10	5.29	4.86	4.78
California	4.63	4.64	4.42	4.07
Colorado	4.89	5.07	4.89	4.42
Connecticut	5.49	5.88	5.46	4.88
Delaware	6.24	6.12	5.82	5.15
District of Columbia	5.54	5.42	4.63	4.32
Florida	5.93	5.55	5.42	4.90
Georgia	4.85	4.74	4.45	3.96
Hawaii	3.43	3.63	3.34	3.20
Idaho	5.34	5.54	5.04	4.71
Illinois	5.84	6.40	6.22	5.92
Indiana	6.05	6.56	6.31	5.80
Iowa	5.18	5.02	4.89	4.34
Kansas	4.98	5.01	5.14	5.09
Kentucky	5.67	5.64	5.60	4.91
Louisiana	4.33	4.25	4.31	3.91
Maine	5.81	5.14	5.65	5.48
Maryland	3.02	2.92	2.78	2.59
Massachusetts	7.13	7.45	6.80	6.24

State Indicators

State	2013	2014	2015	2016
Michigan	5.34	5.37	5.09	4.68
Minnesota	5.48	5.29	5.22	4.74
Mississippi	4.40	4.43	4.10	3.88
Missouri	5.73	5.92	5.62	5.13
Montana	3.72	3.95	4.00	3.51
Nebraska	4.79	4.80	4.79	4.61
Nevada	6.32	6.31	6.53	5.47
New Hampshire	3.77	3.80	3.92	3.35
New Jersey	5.46	5.45	5.65	5.31
New Mexico	4.08	4.27	4.28	4.11
New York	4.96	4.91	4.81	4.31
North Carolina	4.30	4.28	4.13	3.76
North Dakota	3.88	3.80	3.95	3.75
Ohio	5.42	5.47	5.45	5.01
Oklahoma	6.08	5.80	5.93	5.05
Oregon	4.98	5.25	4.93	4.80
Pennsylvania	5.85	5.94	5.80	4.80
Rhode Island	6.40	5.76	5.68	6.22
South Carolina	5.49	5.62	5.65	5.11
South Dakota	5.15	5.30	5.39	4.86
Tennessee	5.56	5.08	5.25	5.03
Texas	4.69	4.68	4.45	4.15
Utah	5.39	5.39	5.13	6.44
Vermont	6.24	6.82	5.70	5.90
Virginia	5.58	6.00	5.86	5.31
Washington	4.47	4.59	4.58	4.25

State Indicators

State	2013	2014	2015	2016
West Virginia	5.55	5.30	5.86	5.37
Wisconsin	4.51	4.71	4.64	4.10
Wyoming	8.41	10.92	8.39	4.54
Puerto Rico	3.69	4.40	4.06	3.84

Note(s):

Articles were fractionally allocated among regions/countries/economies based on the proportion of residences of all named authors. The publication total for the United States reported here includes Puerto Rico, as well as articles for which the location could not be determined; Academic R&D is reported for institutions with R&D over \$150,000. The national total for the United States includes U.S. territories.

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Last updated: January 18, 2018

Science and Engineering Indicators 2018

State Indicators

Academic S&E article output

State	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
United States	224,963	244,666	265,916	272,004	279,707	285,070	291,363	299,223	312,629	318,200
Alabama	2,730	3,048	3,237	3,315	3,426	3,511	3,459	3,429	3,626	3,747
Alaska	268	268	360	324	351	395	368	398	415	400
Arizona	3,530	3,716	4,138	4,161	4,393	4,439	4,505	4,726	4,866	4,857
Arkansas	955	1,080	1,221	1,178	1,289	1,252	1,249	1,273	1,338	1,377
California	27,624	29,362	31,759	32,651	33,566	34,048	35,006	35,633	36,809	37,479
Colorado	3,687	4,084	4,375	4,555	4,502	4,689	4,791	4,873	5,426	5,653
Connecticut	3,864	4,274	4,557	4,696	4,584	4,848	5,040	5,090	5,355	5,666
Delaware	860	958	1,046	1,016	1,058	1,105	1,080	1,037	1,114	1,147
District of Columbia	1,852	1,950	2,066	2,075	2,160	2,111	2,153	2,291	2,485	2,534
Florida	7,151	8,068	9,126	9,541	9,748	10,105	10,351	10,527	10,757	11,240
Georgia	5,670	6,345	6,885	6,860	7,466	7,418	7,652	8,009	8,203	8,372
Hawaii	826	898	925	1,008	1,098	1,155	1,102	1,119	1,138	1,099
Idaho	474	523	573	662	667	635	710	638	765	652
Illinois	10,233	11,132	11,944	12,296	12,606	12,769	13,030	13,451	13,623	13,800
Indiana	4,701	5,100	5,742	6,039	6,214	6,359	6,550	6,854	7,083	7,366
Iowa	2,893	3,070	3,323	3,334	3,289	3,423	3,378	3,418	3,427	3,477
Kansas	1,786	1,897	2,028	2,001	2,074	2,038	2,284	2,353	2,421	2,493
Kentucky	2,076	2,148	2,548	2,495	2,640	2,668	2,573	2,653	2,874	2,883
Louisiana	2,414	2,492	2,902	2,557	2,516	2,532	2,678	2,867	2,922	2,803
Maine	469	505	565	531	595	528	582	588	599	597
Maryland	7,186	7,615	8,473	8,483	8,882	8,778	8,828	9,032	9,599	9,853
Massachusetts	15,313	17,005	18,082	19,017	19,342	19,954	20,292	20,792	22,379	22,841
Michigan	7,751	8,319	9,182	9,283	9,584	9,736	10,345	10,462	11,017	11,003

State Indicators

State	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Minnesota	3,368	3,683	4,106	4,053	4,301	4,255	4,480	4,489	4,784	4,651
Mississippi	1,154	1,214	1,475	1,551	1,476	1,608	1,642	1,628	1,639	1,692
Missouri	4,344	4,634	5,052	5,151	5,355	5,555	5,586	5,650	5,675	5,875
Montana	485	489	535	647	628	629	628	626	658	670
Nebraska	1,391	1,711	1,786	1,742	1,796	1,771	1,779	1,815	2,029	1,961
Nevada	708	760	835	953	959	1,058	1,025	1,011	1,030	948
New Hampshire	941	1,002	1,102	1,146	1,147	1,102	1,137	1,186	1,221	1,234
New Jersey	4,825	5,014	5,498	5,584	5,651	5,623	5,742	5,725	5,940	6,020
New Mexico	1,198	1,382	1,475	1,501	1,487	1,510	1,581	1,531	1,578	1,586
New York	18,646	20,116	21,565	22,528	22,626	22,985	23,643	24,212	24,934	25,918
North Carolina	7,375	8,019	8,760	9,088	9,771	9,703	9,894	10,275	10,935	11,336
North Dakota	449	502	599	635	604	710	656	728	724	783
Ohio	7,906	8,600	9,400	9,529	9,805	9,894	9,878	9,948	10,575	10,789
Oklahoma	1,511	1,751	1,780	1,808	1,865	2,029	2,079	2,119	2,288	2,325
Oregon	2,392	2,645	2,808	2,898	3,018	3,047	3,019	2,988	3,285	3,347
Pennsylvania	13,386	14,222	15,912	15,829	16,198	16,734	16,782	17,628	18,388	18,339
Rhode Island	1,402	1,463	1,633	1,696	1,692	1,706	1,713	1,825	1,927	2,069
South Carolina	2,034	2,227	2,390	2,451	2,457	2,660	2,652	2,855	2,980	2,995
South Dakota	237	234	310	291	371	384	405	455	487	530
Tennessee	3,336	3,715	3,977	4,121	4,244	4,545	4,566	4,691	5,065	5,187
Texas	13,951	15,080	16,596	16,974	17,763	18,264	18,765	19,643	20,859	20,921
Utah	2,256	2,569	2,760	2,961	3,041	2,987	3,111	3,263	3,519	3,556
Vermont	522	595	617	674	676	670	667	691	699	734
Virginia	5,194	5,424	5,986	6,012	6,319	6,590	6,755	7,020	7,221	7,519
Washington	4,817	5,001	5,450	5,406	5,557	5,664	5,668	5,898	6,095	6,091
West Virginia	645	685	771	799	812	814	892	903	1,000	982

State Indicators

State	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Wisconsin	4,254	4,616	4,885	5,022	5,270	5,204	5,360	5,352	5,583	5,773
Wyoming	289	324	349	369	419	408	401	428	477	477
Puerto Rico	372	334	411	505	490	536	533	584	493	491

Science and Engineering Indicators 2018

State Indicators

Academic S&E article output

State	2013	2014	2015	2016
United States	323,887	329,068	322,586	307,855
Alabama	3,884	3,815	3,727	3,581
Alaska	449	424	409	335
Arizona	4,823	5,103	4,998	4,835
Arkansas	1,422	1,421	1,351	1,359
California	37,336	37,700	36,832	34,894
Colorado	5,875	6,009	5,991	5,856
Connecticut	5,723	6,051	5,804	5,578
Delaware	1,171	1,147	1,070	978
District of Columbia	2,564	2,641	2,263	2,092
Florida	11,398	11,198	11,286	10,978
Georgia	8,671	8,769	8,542	8,044
Hawaii	1,163	1,199	1,097	1,006
Idaho	744	764	721	706
Illinois	14,050	14,318	14,212	13,410
Indiana	7,266	7,674	7,525	7,162
Iowa	3,593	3,736	3,551	3,356
Kansas	2,490	2,431	2,518	2,439
Kentucky	2,920	2,852	2,831	2,630
Louisiana	2,742	2,669	2,627	2,463
Maine	601	620	557	535
Maryland	10,183	10,257	10,282	9,712
Massachusetts	23,160	23,985	23,172	21,986
Michigan	11,386	11,367	11,215	10,857

State Indicators

State	2013	2014	2015	2016
Minnesota	4,768	4,685	4,610	4,330
Mississippi	1,697	1,679	1,564	1,601
Missouri	5,893	6,005	5,882	5,579
Montana	652	681	686	649
Nebraska	2,011	2,053	2,089	2,064
Nevada	929	922	968	946
New Hampshire	1,266	1,284	1,319	1,211
New Jersey	6,112	5,889	5,925	5,688
New Mexico	1,594	1,708	1,616	1,469
New York	26,414	26,745	26,225	25,140
North Carolina	11,491	11,723	11,335	10,712
North Dakota	825	819	840	829
Ohio	11,103	11,185	11,003	10,286
Oklahoma	2,338	2,274	2,328	2,164
Oregon	3,325	3,520	3,351	3,372
Pennsylvania	18,929	19,074	18,835	17,795
Rhode Island	2,053	2,182	2,142	2,057
South Carolina	3,114	3,180	3,229	3,095
South Dakota	583	532	524	497
Tennessee	5,412	5,479	5,367	5,222
Texas	21,519	21,788	21,324	20,722
Utah	3,625	3,635	3,672	3,456
Vermont	750	776	678	708
Virginia	7,388	7,723	7,629	7,206
Washington	6,265	6,418	6,557	6,479
West Virginia	1,026	976	1,101	1,012

State Indicators

State	2013	2014	2015	2016
Wisconsin	5,766	5,976	5,695	5,475
Wyoming	531	532	461	493
Puerto Rico	457	516	493	449
<i>Science and Engineering Indicators 2018</i>				

State Indicators

Academic S&E R&D

State	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
United States	25,866.7	27,543.3	30,083.5	32,800.5	36,382.6	40,077.4	43,237.8	45,773.9	47,758.7	49,494.9
Alabama	442.1	416.6	428.1	448.3	503.5	550.8	572.3	589.9	601.9	655.2
Alaska	75.9	93.7	107.4	119.2	128.9	142.4	146.5	153.7	163.0	130.6
Arizona	406.0	439.3	465.8	500.5	531.1	618.0	651.0	720.2	765.4	782.7
Arkansas	117.1	112.4	131.9	142.3	140.8	183.9	183.0	209.5	237.2	240.0
California	3,392.1	3,665.2	4,067.8	4,428.9	4,887.9	5,357.9	6,012.9	6,264.9	6,490.1	6,733.5
Colorado	489.4	507.7	544.6	573.0	645.3	694.9	771.4	825.0	820.6	872.6
Connecticut	406.6	419.4	468.7	499.1	538.5	594.5	649.2	669.9	692.0	691.4
Delaware	72.8	76.3	78.1	80.0	88.3	104.7	114.7	115.8	122.0	125.7
District of Columbia	232.9	223.8	245.8	228.1	260.8	280.9	303.0	302.9	296.2	336.6
Florida	712.7	788.7	851.9	985.6	1,085.8	1,204.6	1,306.8	1,448.6	1,522.1	1,557.5
Georgia	804.2	841.0	926.7	989.0	1,076.7	1,176.5	1,222.2	1,274.4	1,302.6	1,389.0
Hawaii	148.0	156.8	161.3	157.0	172.7	184.6	241.3	240.2	257.5	274.4
Idaho	72.4	71.7	73.7	82.5	93.3	105.0	116.8	119.9	111.5	114.2
Illinois	1,031.0	1,101.6	1,170.9	1,281.3	1,441.2	1,614.3	1,713.3	1,771.1	1,824.2	1,867.0
Indiana	426.3	460.4	509.1	584.4	650.7	725.8	841.1	759.6	823.5	893.8
Iowa	358.6	375.3	418.3	439.8	485.8	498.7	531.8	548.3	572.6	586.8
Kansas	213.3	234.6	258.5	268.9	299.8	310.1	332.5	348.8	354.4	376.0
Kentucky	241.5	274.9	277.0	298.3	334.2	377.6	424.0	452.3	479.3	503.3
Louisiana	354.0	376.9	409.5	436.5	476.8	514.4	559.4	584.3	552.9	604.0
Maine	35.3	44.4	57.8	71.0	75.1	83.9	99.1	96.6	120.0	137.4
Maryland	1,330.3	1,387.4	1,507.7	1,653.8	1,895.4	2,040.7	2,268.3	2,356.9	2,530.0	2,542.3
Massachusetts	1,348.2	1,401.9	1,486.2	1,579.0	1,697.2	1,821.9	2,000.1	2,079.5	2,122.8	2,171.6
Michigan	882.7	921.6	1,007.9	1,108.6	1,233.9	1,390.1	1,397.4	1,456.2	1,473.2	1,510.0

State Indicators

State	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Minnesota	367.8	377.4	418.0	469.4	504.4	517.9	535.5	558.3	605.2	636.9
Mississippi	152.7	175.1	217.1	261.0	289.4	324.2	347.6	353.1	369.1	410.6
Missouri	484.5	549.9	614.0	678.2	705.6	807.1	841.8	893.0	900.2	941.4
Montana	76.7	84.5	99.1	107.7	122.4	141.2	154.7	170.8	172.6	179.1
Nebraska	186.3	205.5	208.5	241.6	266.9	300.5	325.0	360.1	358.9	364.8
Nevada	83.9	91.5	106.2	115.9	126.7	154.5	163.8	178.5	194.5	192.1
New Hampshire	117.3	127.1	151.0	197.0	220.1	252.2	277.2	287.5	315.4	307.1
New Jersey	484.9	521.3	567.7	628.0	690.6	754.4	805.1	865.6	858.4	864.7
New Mexico	228.7	224.5	243.8	274.2	292.7	306.6	303.9	361.5	421.4	410.4
New York	1,929.7	2,074.8	2,297.1	2,458.4	2,742.9	3,055.1	3,331.8	3,585.3	3,812.9	3,971.7
North Carolina	899.5	1,012.9	1,040.9	1,139.1	1,279.4	1,397.9	1,446.9	1,655.3	1,709.9	1,884.2
North Dakota	56.9	61.7	67.4	84.6	106.1	133.6	151.7	150.0	160.1	169.5
Ohio	810.2	831.3	918.2	996.1	1,116.1	1,268.4	1,319.7	1,531.6	1,637.5	1,767.9
Oklahoma	208.9	238.8	252.4	255.2	282.1	295.1	283.0	291.7	298.2	298.7
Oregon	314.4	327.9	346.1	366.0	386.7	437.0	504.8	536.2	557.4	574.5
Pennsylvania	1,348.9	1,391.3	1,553.2	1,693.8	1,913.7	2,014.8	2,208.1	2,367.8	2,431.4	2,438.3
Rhode Island	112.0	120.9	129.7	142.6	163.1	187.1	192.3	199.7	230.1	230.3
South Carolina	248.5	267.9	294.3	361.4	400.0	435.3	456.0	487.8	524.0	569.3
South Dakota	25.5	25.8	27.6	32.5	38.4	50.0	58.6	67.0	72.8	81.5
Tennessee	346.7	371.7	405.3	428.3	491.3	600.0	658.2	726.1	742.9	761.4
Texas	1,697.3	1,830.0	2,037.7	2,251.8	2,535.2	2,764.8	2,879.1	3,073.7	3,270.7	3,417.1
Utah	249.1	273.2	308.1	338.1	359.6	385.2	407.3	400.3	412.8	414.7
Vermont	58.6	64.8	64.8	76.9	90.2	106.6	115.8	117.4	123.6	115.0
Virginia	497.2	505.4	553.9	610.9	693.7	776.1	849.0	910.2	946.9	971.4
Washington	543.2	589.7	644.0	707.8	784.2	871.1	897.3	901.6	988.3	981.2
West Virginia	64.2	65.7	75.5	81.9	100.8	125.4	135.0	146.5	150.4	167.2

State Indicators

State	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Wisconsin	536.0	597.4	662.1	729.3	806.5	877.8	956.7	999.8	1,039.5	1,066.7
Wyoming	48.5	47.2	43.1	41.6	41.6	60.1	60.1	83.4	89.4	79.7
Puerto Rico	87.6	90.5	74.5	63.8	70.3	78.4	86.5	100.2	104.1	106.9

Science and Engineering Indicators 2018

State Indicators

Academic S&E R&D

State	2008	2009	2010	2011	2012	2013	2014	2015	2016
United States	51,871.8	54,863.0	58,387.6	61,988.1	62,198.6	63,354.9	63,764.1	64,945.5	67,672.4
Alabama	707.8	762.0	829.4	878.6	804.7	807.2	784.9	868.2	917.4
Alaska	128.2	131.8	141.2	140.7	135.8	133.2	168.9	157.6	163.1
Arizona	831.2	873.1	901.7	951.2	987.1	1,013.9	987.3	1,031.3	1,072.6
Arkansas	246.6	239.4	255.5	270.6	275.5	278.6	268.6	278.3	284.2
California	7,026.4	7,406.7	7,579.8	7,927.3	8,102.9	8,056.4	8,122.7	8,335.5	8,564.4
Colorado	924.1	1,058.3	1,128.5	1,240.9	1,249.4	1,200.5	1,184.4	1,226.2	1,326.3
Connecticut	731.7	752.8	866.6	922.7	924.4	1,042.4	1,029.7	1,062.8	1,143.7
Delaware	133.2	133.8	161.9	178.5	176.7	187.7	187.3	183.9	189.8
District of Columbia	375.5	325.2	430.9	446.4	455.1	463.0	487.3	488.8	483.9
Florida	1,591.8	1,663.5	1,778.3	1,896.6	1,930.2	1,921.9	2,019.5	2,080.9	2,238.5
Georgia	1,521.5	1,565.6	1,611.4	1,657.9	1,711.6	1,789.1	1,850.3	1,918.0	2,029.5
Hawaii	278.8	300.3	314.7	325.9	328.2	339.0	330.6	328.7	314.4
Idaho	113.5	120.7	122.8	139.4	143.0	139.4	137.8	143.0	150.0
Illinois	1,972.8	2,113.1	2,146.1	2,264.2	2,269.7	2,407.2	2,238.3	2,284.1	2,265.4
Indiana	954.6	1,005.2	1,048.2	1,141.8	1,150.3	1,200.7	1,169.1	1,191.8	1,235.2
Iowa	527.8	562.6	689.8	705.7	695.5	693.1	743.7	726.2	774.0
Kansas	403.5	441.3	460.6	466.9	479.7	499.8	485.6	490.0	478.8
Kentucky	498.7	518.9	538.2	555.6	546.9	515.4	505.8	505.6	535.4
Louisiana	660.3	671.1	657.6	667.5	653.9	632.5	627.5	609.1	630.0
Maine	128.1	128.4	118.8	129.2	118.6	103.4	120.6	98.6	97.7
Maryland	2,747.0	3,021.1	3,094.1	3,366.7	3,308.0	3,376.4	3,514.7	3,705.0	3,744.0
Massachusetts	2,271.8	2,463.4	2,628.8	2,806.8	3,010.7	3,246.1	3,218.4	3,406.2	3,521.5
Michigan	1,593.7	1,742.1	1,903.5	2,029.7	2,076.9	2,134.1	2,115.4	2,202.0	2,320.6

State Indicators

State	2008	2009	2010	2011	2012	2013	2014	2015	2016
Minnesota	698.9	758.1	802.8	866.3	840.7	869.8	885.3	882.5	912.8
Mississippi	406.5	416.8	418.2	431.4	437.8	385.9	378.8	381.4	412.2
Missouri	960.2	1,008.9	964.2	984.4	1,056.0	1,028.7	1,014.5	1,046.4	1,088.2
Montana	185.8	181.6	195.6	182.3	184.8	175.1	172.2	171.5	184.8
Nebraska	376.1	393.6	383.3	393.4	419.2	419.6	428.0	435.8	447.7
Nevada	190.9	182.0	171.0	160.3	149.3	147.1	146.1	148.3	172.9
New Hampshire	302.0	298.3	298.6	341.8	349.9	335.5	337.9	336.9	361.8
New Jersey	878.3	913.9	1,022.7	1,091.9	1,060.5	1,120.1	1,081.0	1,048.6	1,071.8
New Mexico	417.0	435.4	407.4	400.1	390.5	390.7	400.2	377.5	357.4
New York	3,982.0	4,174.9	4,782.2	5,105.1	5,157.9	5,327.5	5,450.4	5,449.9	5,828.9
North Carolina	1,979.2	2,160.5	2,422.9	2,603.7	2,618.6	2,669.3	2,741.3	2,744.9	2,847.3
North Dakota	180.8	185.7	202.6	209.4	213.7	212.7	215.6	212.5	221.3
Ohio	1,827.0	1,895.1	1,963.6	2,107.8	2,017.4	2,048.4	2,043.8	2,017.4	2,055.0
Oklahoma	333.2	336.9	383.1	418.4	413.0	384.7	391.9	392.5	428.9
Oregon	594.9	636.6	663.4	701.2	681.0	668.0	670.1	679.7	701.8
Pennsylvania	2,604.1	2,722.3	3,026.8	3,201.6	3,125.8	3,237.8	3,210.2	3,249.3	3,710.3
Rhode Island	236.6	246.3	287.7	330.3	335.7	320.7	379.1	377.0	330.5
South Carolina	576.2	611.5	617.0	576.9	563.6	567.3	565.8	571.7	605.2
South Dakota	91.8	102.3	126.6	132.3	123.4	113.3	100.3	97.2	102.3
Tennessee	787.1	833.0	880.0	952.4	968.3	973.5	1,079.5	1,022.3	1,038.0
Texas	3,744.2	3,982.1	4,220.8	4,427.6	4,413.6	4,585.5	4,658.7	4,794.5	4,994.5
Utah	425.7	500.4	551.6	614.3	608.2	673.1	674.1	715.1	537.0
Vermont	117.2	125.0	132.5	136.6	119.8	120.2	113.7	119.0	120.0
Virginia	1,052.6	1,088.4	1,134.4	1,300.3	1,283.9	1,323.1	1,287.1	1,302.6	1,356.5
Washington	1,058.2	1,083.8	1,305.0	1,438.3	1,376.5	1,402.1	1,399.6	1,431.2	1,525.3
West Virginia	169.1	174.5	178.4	196.0	189.2	185.0	184.3	187.9	188.6

State Indicators

State	2008	2009	2010	2011	2012	2013	2014	2015	2016
Wisconsin	1,117.2	1,203.9	1,230.9	1,338.6	1,330.3	1,278.0	1,269.0	1,227.5	1,336.0
Wyoming	74.7	77.6	54.0	55.3	63.8	63.1	48.7	54.9	108.6
Puerto Rico	111.7	105.3	115.0	152.4	141.2	123.8	117.3	121.3	116.9

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